Influences on Mobility Among Non-Driving Older Americans

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The 1995 National Personal Transportation Survey provides a snapshot of the daily travel patterns of a representative sample of the United States population. These data support the widely accepted notion that non-drivers aged 75 and older are among those most at risk for the social isolation and inadequate service availability that can follow from reduced mobility. This paper explores the factors associated with trip making among this group as they are reflected in the 1995 National Personal Transportation Survey. The analyses conducted here seek to identify those personal and community characteristics measured in the survey that are associated with trip making among the non-driving 75+ population. The profile that emerges suggests that beyond the constraints of physical and economic well-being, it is housing density and community context that most influence mobility among the non-driving 75+ population. Notably, when housing density is controlled, living in a central city area appears negatively associated with mobility among the 75+ non-driving population. The relationship between trip-making and central city residence suggests that perceived safety may influence mobility among this population. Transit availability does not seem to bear a significant role in mobility among this group when other factors are controlled.

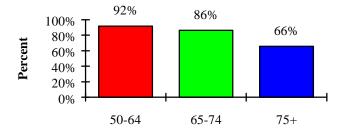
Introduction

America relies on the car for mobility. According to the 1995 National Personal Transportation Survey (NPTS), over 90% of all miles traveled, and over 85% of all trips taken, occur in private vehicles (1). There are over one and a half vehicles per household in the U.S., and the average American driver spends about and hour and a quarter per day in a car (1). Despite these figures, vehicle ownership and car travel are not universal. Generally, mobility via the car is less available to disadvantaged populations. While households with annual incomes under \$25,000 comprise about 30% of U.S. households, they account for over 65% of the households without a car (1).

The general decline in physical capabilities associated with aging also tends to reduce automobility (2). About 85% of the 50+ population reported that they were licensed to drive in the 1995 NPTS. Driving demonstrates a marked association with age in this cohort (3). While over 90% of those ages 50-64 report driving, about 65% of the 75+ population drives (See Chart 1).

Chart 1

Percent of 50+ NTPS Respondents Who are Drivers by Age Group

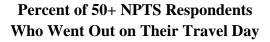


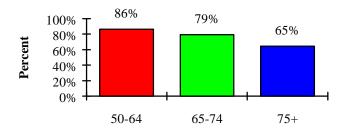
The NPTS data also indicate that among the 50+ age cohort, aggregate mobility is related to age in a similar fashion. The NPTS captured all trips taken by persons aged five and over in NPTS sample households for a specific day. A trip is defined as going "from one address to another in a vehicle or by walking or biking" (4). The data were collected primarily through the use of travel diaries. Detailed information on travel mode and trip purpose were collected. The trip count by purpose and mode were aggregated for each person in the NPTS for this analysis. Those respondents in the sample with no trips recorded were assigned a trip count of zero. All travel days, both weekdays and weekends, have been included.

These data have been analyzed to identify those respondents who did not go out, as opposed to those who left their home at least once, on their documented trip day. This measure has been used here as a gauge for general mobility, recognizing that the relative brevity of the one day travel period may limit the reliability of the measure. Overall,

about 80% of 50+ respondents to the NPTS left their homes at least once on their trip day. This proportion ranges from 86% among the 50 to 64 age group, down to 65% among those age 75+ (See Chart 2).

Chart 2

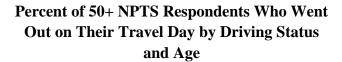


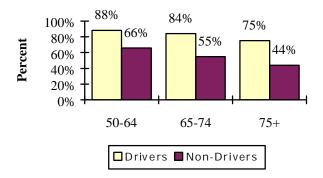


The relationship between driving and trip making among the older population implied by these findings is confirmed by the data. While 85% of drivers age 50+ went out on their trip day, 53% of 50+ non-drivers left the house. There is a substantial difference in trip making associated with driving that increases with age. This difference is most pronounced, and most critical, among the 75+ population. While 75% of 75+ drivers went out at least once on their trip day, just 44% of non-drivers age 75 and older went out (See Chart 3). While a general reduction in trip making is found among 75+ population, it is the non-driving population that is most home-bound. To the extent that age influences health and ambulatory mobility, and this mobility serves as a facilitator of activity and social involvement (5), this decline is to be expected. Indeed, recent

research suggests that travel, social, and recreational activities tend to decline with age due largely to health issues, dropping off precipitously in the late seventies (6).

Chart 3





The NPTS data support the widely accepted notion that it is the non-driving population over the age of 75 who are among the least mobile, and among those most at risk for the social isolation and inadequate service availability that can follow from reduced mobility. While the lifestyle changes that accompany aging often naturally lead to reduced triptaking that is not necessarily reflective of unmet demand for transportation (7), the differential in trip taking associated with driving among the 75+ population does indicate that restricted mobility is an issue for non-driving persons age 75+. This paper will explore the factors associated with trip making among this group as they are reflected in the 1995 NPTS. The analysis conducted here will seek to identify those personal and

community characteristics measured in the NPTS that are associated with trip making among the non-driving 75+ population.

Factors Associated with Trip-Making Among Non-Drivers Aged 75 and Older

The NPTS collected a wide range of information on the survey respondents and their households. Most notably, data intended to represent community characteristics were added to the data on income, education, race/ethnicity, housing, family structure and employment status more customarily included on federal surveys. These community data, prepared by Claritas, Inc., were appended to the NPTS household records at the Census Block Group and Census Tract levels. Information on housing type and density, tenure, age of the housing stock, median income, racial/ethnic mix, population density, and urban/rural character were geocoded to the survey records. The Claritas urban/rural typology segments the nation into five groups: urban (central city), suburban, second city, town and rural. "This method incorporates a contextual density measure that evaluates an area's weighted population density in relation to neighboring areas" (8). Both population density, and the spatial relationship to population centers are incorporated in this measure. The tract level data have been used here, rather than the block group data. It was felt that this larger geographic unit might better represent the "community" of the respondents.

These two sets of data, the personal and household profile data collected with the NPTS questionnaire, and the community profile data geocoded to the survey responses at the Census Tract level, will be used here in an effort to build an understanding of the

personal, household, and community characteristics that are related to mobility among the non-driving population age 75+. Table 1 provides a listing of all variables used in this study.

Table 1
Stepwise Discriminant Analysis and Multiple Regression Findings for General
Mobility, Transit Availability, and Reported Transit Use

VARIABLE	DESCRIPTION OF VARIABLE	DEF	DEPENDENT VARIABLE				
		WENTOUT	PTAVAIL	USEPT			
		Discrimina	nt Analysis	Regression			
		Standardized Discriminant	Standardized Discriminant	Standardized			
		Coefficient	Coefficient	Coefficient			
APTHOUSE	Respondent reported as living in an Apartment	0.59					
ASIAN	Respondent Household reported as Asian						
ATTHOUSE	Respondent reported as living in a Duplex or Row House		0.07				
BLACK	Respondent Household reported as African American		0.10				
BUSDIST	Distance to Nearest Bus Stop	(excluded)	(excluded)				
DETHOUSE	Respondent reported as living in a Detached House			-0.10			
DRVRCNT	Number of Drivers in Respondent Household			-0.25			
EDUCORD	Respondent Years of Education Completed (Missing Imputed)	0.24		0.08			
FEMALE	Respondent is Female		0.09				
HHLDINC	Household Income (Missing Imputed)			*0.08			
HHSIZE	Number of Persons in Respondent Household	-0.42					
HISP	Respondent Household reported as Hispanic						
HTEEMPDN	Employment Density in the Respondent Household Census Tract		0.12				
HTHHSMLT	Percent of Housing Multi-Unit Dwellings in Respondent Census Tract						
нтннѕотн	Percent of Housing Other in Respondent Household Census Tract						
HTHHSSNG	Percent of Housing Single Family Dwellings in Respondent Census Tract						
HTHMEDHS	Median Housing Value in Respondent Household Census Tract		0.11				
HTHRECNT	Percent of Housing Built in Last 10 Years in Respondent Census Tract		-0.16				
HTHRESDN	Housing Units Per Square Mile in Respondent Household Census Tract	0.53		*0.09			
HTHTNOWN	Percent Housing Units Owner Occupied in Respondent Household Census Tract						
HTINDRET	Percent of Employment in Retail in Respondent Household Census Tract	-0.18					
HTPPOPDN	Population Density in Respondent Household Census Tract						
HTPRCCAU	Percent of Population White in Respondent Household Census Tract			0.13			
OWNHOME	Respondent Lives in an Owned Home	0.45					
PTAVAIL	Respondent Household reports Transit Available		(dependent)	(excluded)			
R_AGE	Respondent Age	-0.61	0.09	-0.13			
T2NDCTY	Second City Census Tract						
TRURAL	Rural Census Tract		-0.94				
TSUBURB	Suburban Census Tract						
TTOWN	Town Census Tract		-0.82				
TURBAN	Central City Census Tract	-0.31		0.14			
USEPT	Reported Frequency of Transit Use	(excluded)	(excluded)	(dependent)			
WENTOUT	Respondent Left House for Trip on NPTS Trip Day	(dependent)	(excluded)	(excluded)			
WHITE	Respondent Household is White			-0.16			
	Total Cases Included (Unweighted)	1562	1562	986			
	Percent of Cases Correctly Classified	61.6%	85.5%				
	Adjusted R Square			0.16			
	Standard Error			1.33			

Shaded cells indicate statistically significant findings (assuming a random sample).

All loading variables were significant to at least .01 unless noted by "*". Variables so noted were found significant to the .05 level.

Stepwise discriminant analysis has been used to identify those personal, household, and community characteristics of non-driving 75+ respondents associated with mobility as

measured by having gone out or not on the NPTS trip day (WENTOUT). The 1995 NPTS provides an unweighted sample of 1,573 non-driving persons aged 75 and older. The population weight for the NPTS Person File has been proportionately reduced to hold the sample size, based on the total NPTS sample, constant for statistical purposes. It is important to remember that stepwise analyses do not in any sense yield the best model for any given set of data. Rather, they produce the strongest statistical model, based on the stepwise algorithm applied. Further, the contribution of any given variable, as with any multivariate, regression-based model, depends on the presence of the other variables included. Conversely, variables that have been ruled out by the procedure may demonstrate a relationship with the dependent variable in the context of a different model. The model identified the following characteristics as having a positive relationship with having made at least one trip on the NPTS trip day (See Table 1):

- Living in an Apartment
- Higher Levels of Housing Density (Census Tract)
- Home Ownership
- Higher Levels of Education

The following variables demonstrated a negative relationship with having gone out at least once:

- Higher Ages
- Larger Households
- Living in a Central City Urban Area (Census Tract)
- Higher Proportions of Retail Employment (Census Tract)

On its face, this analysis seems to have yielded some contradictory findings. Higher housing densities and apartment living are positively related to trip making, while central city areas and areas with higher concentrations of retail employment are associated with a lower likelihood of trip making. This suggests that mobility among the non-driving 75+ population is associated with higher housing densities, and that this effect is most pronounced outside retail and urban core areas. This analysis was replicated excluding the approximately 200 weighted cases from New York state in order to control for the bias that may have resulted from the anomalous New York City environment, with no substantive effect on the findings.

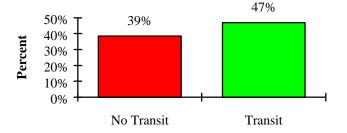
Higher levels of education and home ownership and smaller households, in short -- affluence -- also seem to be associated with mobility in this group. As might be expected, age is associated with reduced trip making within the 75+ age group among non-drivers.

Taken together, these findings paint a picture that suggests the mobility of 75+ non-drivers is enhanced among apartment dwellers who live outside urban core areas, in non-commercial, affluent venues where residential densities are relatively high.

Notably, while a measure for public transit availability was introduced in the above analysis, it did not prove to be significant to the model after adjusting for the influence of the measures included by the stepwise procedure. There is, however, a difference in trip making associated with public transit availability among 75+ non-drivers (See Chart 4). Among those who reported the availability of public transportation, 47% made at least one trip, whether by transit or not, as compared to 39% of those without public transit available.

Chart 4

Percent of 75+ NPTS Respondents Who Went Out on Their Travel Day by Public Transit Availability



Factors Associated with Public Transportation Availability Among 75+ Non-Drivers

A model for transit availability (PTAVAIL) among 75+ non-drivers has been constructed using the same techniques applied above. The following factors were found to be positively associated with reported transit availability (See Table 1):

- Being Black
- Higher Levels of Employment Density (Census Tract)
- Being Female
- Higher Ages
- Higher Median Home Values (Census Tract)
- Living in an Attached House

These variables demonstrated a negative association with transit availability:

- Rural Areas (Census Tract)
- Towns (Census Tract)
- Newer Housing Stock (Census Tract)

Here, the interpretation seems straight forward. African Americans, women, higher levels of employment density in the community, living in an attached house, and being older are associated with transit availability. All of these characteristics are associated to some

degree with "urban" environments. As would be expected, the rural and town areas, and areas with newer housing are less likely to provide public transit.

Housing value stands alone as a somewhat ambiguous factor. Higher home values are associated with reported transit availability. This may be accounted for by the paucity of transit in poor, rural areas, as well as in the poorest, most disenfranchised urban communities. In addition, transit is more prominent in older, close-in suburban venues where property values are relatively high, than in newer, outer suburban areas. More generally, the synergy between public transit and development tends to reenforce or even create nodal areas within metropolitan regions. These nodes are also the places where property values are highest. Typically, land values tend to decline out from the Central Business District, with ridges of higher values that follow the major arterial routes. Secondary land value peaks occur at the major intersections with the arterials (9). In other words, accessibility tends to enhance land values.

Transit Use Among the Non-Driving 75+ Population with Transit Available

Who among the 75+ non-driving population uses transit when it is available? The survey provides a self reported weekly estimate of transit use. The community and personal variables used throughout this study have been used to explore influences on transit use, with the addition of one new measure. For those households with transit availability, the distance to the nearest bus stop is provided in the data. This variable has been added to the list of potential influences on transit use. Stepwise regression has been used to

estimate an equation for the ordinal measure of weekly transit use (USEPT) found in the survey. The following factors were found to be associated with transit use among the non-driving 75+ population with transit available (See Table 1):

- Higher Levels of Housing Density (Census Tract)
- Central City Urban Areas (Census Tract)
- Higher Levels of Education
- Higher Incomes
- Higher Proportions of White Population (Census Tract)

The following factors are associated with a reduced propensity to utilize public transportation:

- More Drivers in the Household
- Higher Ages
- Being White
- Living in a Detached House

Living in areas with high housing densities, in central city areas, areas with relatively high proportions of white population, and having higher levels of education and income are associated with transit use. Being older, having drivers available in the household, being white, and living in a detached house, tend to reduce transit use. The distance to the nearest bus stop was not found to be significant in the face of the variables included. It is

important to recognize that other factors, such as the quality, frequency, and safety of the service, are not captured by this measure.

Modal Choice Among 75+ Non-Drivers Who Went Out on Their Trip Day

The NPTS data provides measurement of trip segments taken on the assigned travel day by mode. While the modal choices of those who went out on their travel day are not necessarily reflective of the behavior of those who did not leave home, these data have been analyzed to highlight the differences in modal choices that exist between older drivers and older non-drivers, and to explore the factors associated with modal choice among older non-drivers.

Table 2:

Trips Segments by Mode Among the 75+ Population: Drivers and Non-Drivers Who

Went Out On Their Travel Day

Mode	Non-Drivers		Drivers	
	Trips	% of Trips	Trips	% of Trips
POVs	1578	70.38%	9376	95.27%
Public Transportation	187	8.32%	53	0.54%
Train/Plane	0	0.01%	14	0.14%
Taxi	34	1.53%	4	0.04%
Walk or Bike	418	18.66%	369	3.75%
School Bus	0	0.00%	0	0.00%
Other	24	1.09%	26	0.27%
Total	2242	100.00%	9842	100.00%
N	702		2282	
Mean Trips	3.19		4.31	

As Table 2, illustrates, among those age 75+ who took at least one trip on their assigned day, drivers were likely to have taken more trips (4.31) than non-drivers (3.19). Moreover, while over 95% of trips taken by 75+ drivers were taken in motor vehicles, just 70% of non-driver trips were in automobiles. Notably, nearly twenty percent of non-driver trip segments were walking trips, and over eight percent were on public transportation.

The same stepwise discriminant analysis model used above has been applied to explore the personal and community characteristics associated with the major modes chosen by 75+ non-driving respondents to the NPTS who went out on their travel day. Dichotomous measures for POV use, transit use, and walking have been analyzed as the dependent variables (Table 3).

Table 3: Stepwise Discriminant Analysis Models for Modal Choice Among 75+ Non-Drivers Who Went Out on Their Travel Day

VARIABLE	DESCRIPTION OF VARIABLE	DEPENDENT VARIABLE		
		CARTRIP	WALKTRIP	TRANTRIP
		Standardized Discriminant	Standardized Discriminant	Standardized Discriminant
		Coefficient	Coefficient	Coefficient
APTHOUSE	Respondent reported as living in an Apartment			
ASIAN	Respondent Household reported as Asian			
ATTHOUSE	Respondent reported as living in a Duplex or Row House	-0.32		0.53
BLACK	Respondent Household reported as African American	-0.26		0.26
BUSDIST	Distance to Nearest Bus Stop	(excluded)	(excluded)	
CARTRIP	Respondent Went Out and Took at Least One POV Trip on Travel Day	(dependent)	(excluded)	(excluded)
DETHOUSE	Respondent reported as living in a Detached House			
DRVRCNT	Number of Drivers in Respondent Household	0.34	-0.44	-0.51
EDUCORD	Respondent Years of Education Completed (Missing Imputed)	-0.18	0.33	
FEMALE	Respondent is Female			
HHLDINC	Household Income (Missing Imputed)			
HHSIZE	Number of Persons in Respondent Household			
HISP	Respondent Household Reported as Hispanic	0.18	-0.23	
HTEEMPDN	Employment Density in the Respondent Household Census Tract			
HTHHSMLT	Percent of Housing Multi-Unit Dwellings in Respondent Household			
HTHHSOTH	Percent of Housing Other in Respondent Household Census Tract			
HTHHSSNG	Percent of Housing Single Family Dwellings in Respondent Household			
HTHMEDHS	Median Housing Value in Respondent Household Census Tract			
HTHRECNT	Percent of Housing Built in Last 10 Years in Respondent Household			
HTHRESDN	Housing Units Per Square Mile in Respondent Household Census Tract			
HTHTNOWN	Percent Housing Units Owner Occupied in Respondent Household Census Tract		-0.33	
HTINDRET	Percent of Employment in Retail in Respondent Household Census Tract			
HTPPOPDN	Population Density in Respondent Household Census Tract	-0.76	0.48	
HTPRCCAU	Percent of Population White in Respondent Household Census Tract		0.24	
OWNHOME	Respondent Lives in an Owned Home			
R_AGE	Respondent Age			-0.52
TRANTRIP	Respondent Went Out, Has Transit Available, and Took at Least One Transit Trip	(excluded)	(excluded)	(dependent)
T2NDCTY	Second City Census Tract		-0.45	
TRURAL	Rural Census Tract			
TSUBURB	Suburban Census Tract			
TTOWN	Town Census Tract			
TURBAN	Central City Census Tract			0.32
WALKTRIP	Respondent Went Out and Took at Least One Walking/Bike Trip on Travel Day	(excluded)	(dependent)	(excluded)
WHITE	Respondent Household is White			
	Total Cases Included (Unweighted)	700	700	491
	Percent of Cases Correctly Classified	77.4%	72.9%	65.4%

Among 75+ non-drivers who went out, having taken at least one POV trip demonstrates a positive association with the number of drivers in the household, and with being Hispanic. POV trips are negatively associated with higher population densities, living in an attached house, being black, and higher levels of education.

Pedestrian trips (and cycling trips such as they may be found) among this group are positively related to higher population densities, rental communities, higher proportions of white population in the community, and higher levels of education. Walking tends to be

dampened among respondents with other drivers available in the household, in "second city" communities, and among Hispanic respondents.

The factors associated with transit use among 75+ non-drivers who went out on their travel day are similar to those that demonstrated relationships with the reported weekly estimate of transit use. Attached housing, "urban" or "central city" communities, being African American, and younger ages within the cohort, are associated with a higher propensity to use transit. More drivers in the household tend to reduce reliance on public transportation.

The NPTS indicates that non-driving persons over age 75 are less inclined to go out, and take fewer trips, than their driving counterparts. As might be expected, 75+ non-drivers are much more likely to employ modes other than the POV to meet their transportation needs. Population density, community context, age, race, education, and drivers available in the household demonstrate significant relationships with model choice among 75+ non-drivers who went out on their travel day. However, these associations cannot be linked the general propensity to take trips among the 75+ non-driving population.

Discussion and Conclusions

These analyses suggest that several key factors influence travel behavior among the non-driving 75+ population. Age emerges as a factor related to mobility as measured by having made at least one trip. Given that age is a strong correlate with health and physical

well-being among this group, it is clear that as one ages beyond the age of 75, mobility will generally be reduced, regardless of other factors (10,11).

Household size is also key to travel behavior among this group. The data suggest that when other factors are controlled, 75+ non-drivers from larger households are less inclined to go out. Recent Canadian-based research noted a negative relationship between household size and activity, both at home and outside the home, among the elderly (3). This may stem from several possible sources. Those from larger households may not need to go out as often if there are other family members available for shopping and social interaction. Further, those persons with major activity limitations that have moved in with children or siblings as a care strategy would fall into this group (12). There is evidence to suggest that frail elderly that live with others are at greater risk for problems relating to "finances, service, social contact, modified housing, or neighborhood" (13). Lastly, lower income older persons more often live in larger households (2). Larger households do not seem to contribute to enhanced mobility in terms of ride-giving, as might be expected, although the number of drivers available in the home does appear to reduce transit utilization.

Among 75+ non-drivers, apartment living, higher levels of housing density in the community, and affluence as reflected by education and home ownership demonstrate a positive association with trip making. Some of these are decidedly "urban" characteristics. However, this analysis indicates that living in central city urban areas and areas with relatively high proportions of retail employment tend to reduce trip making

among this population. This suggests that affluent but densely settled areas away from the urban core are most conducive to trip making among 75+ non-drivers.

While the data do not permit explicit investigation of the issue, the negative or "suppressing" influence of living in a central city area on trip making suggests that safety, or perceived safety, may be a determinant of mobility among the urban 75+ non-driving population. Recent data bear out the conventional wisdom that age is associated with the risk of crimes against person or property in urban areas. Persons age 55+ in cities were more than twice as likely to be victimized by violent crime than those in suburban or rural communities between 1987 and 1990 (14). The Lavine and Wachs study of transit use by the elderly in Los Angeles found that some 20% of transit users over age 65 had been victims of a crime as compared to just 8% of those under age 30 (7). They also found that transit-related crime among the elderly was grossly under-reported. So, while the elderly may be the "least likely of all age groups in the nation to experience ... criminal victimization" (14), they may suffer disproportionate risk in urban areas and in transitrelated settings. It follows then, that urban elderly demonstrate higher levels of anxiety and fear of crime than do older residents of non-urban areas (15). Fear of crime has also been found to inhibit the use of public transportation among the elderly. A study of older bus riders in Philadelphia found that fear of crime, particularly at night, in the presence of teenagers, or when there was a perceived lack of adequate police protection, was the strongest obstacle to transit utilization among the issues considered (16). The 1996 AARP Housing Survey asked 1300 respondents age 50+ if they "avoid using public transportation because of concerns about crime". Overall, 19% answered in the

affirmative. Recent analysis of these data by the author suggest that being female, lower incomes, and higher population densities are associated with avoidance of public transit because of concerns about crime. Unfortunately, the Claritas "urbanicity" assessment is not available on this data set.

The series of charts below illustrates the relationship between housing unit density and urbanicity as they relate to trip making among non-driving persons age 75+ in the 1995 NPTS. Overall, 54% of those living in communities with the highest housing densities went out on their trip day, as compared to just 37% of those living in the least dense areas (Chart 5). Chart 6 suggests that overall, there is a rough parity in mobility among older non-drivers from central city (47%), second city (52%) and suburban (47%) communities, although a somewhat heightened trip rate is noted in the second city areas. However, those living in more densely settled communities outside of central city areas were significantly more likely to have gone out on their trip day (Chart 7). About 50% of central city dwellers living in the highest density areas went out, as compared to 68% of those living in the highest density census tracts outside central city areas. Of course these high density "non-urban" areas are primarily second city and suburban venues.

Chart 5

Percent of Non-Driving 75+ NPTS
Respondents Who Went Out on Their
Travel Day by Housing Density
(Units/Sq. Mi.)

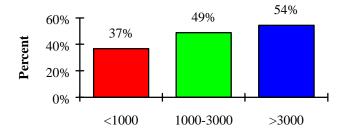
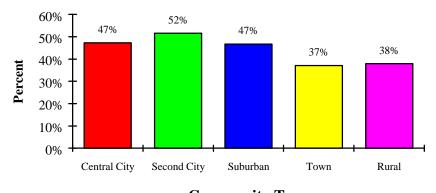


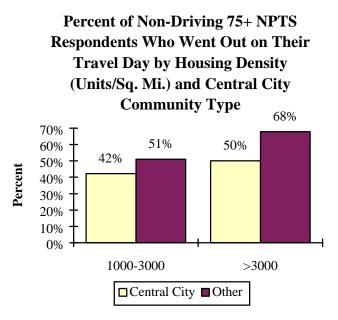
Chart 6

Percent of Non-Driving 75+ NPTS Respondents Who Went Out on Their Travel Day by Community Type



Community Type

Chart 7



This profile suggests that beyond the constraints of physical and economic well-being, it is density and community context that most influence mobility among the non-driving 75+ population. Transit availability does not seem to bear a discernible role in mobility among this group when other factors are controlled. Older non-driving residents of more affluent, densely settled areas away from the urban core may have greater accessibility to ride-sharing and other options than their central city counterparts while sharing the benefits of compact development they enjoy. Residents of more affluent, higher density areas outside the core may also experience less anxiety with respect to crime, and greater comfort walking, or using public transportation facilities than those living in central city communities. Analysis of factors associated with transit use among the 75+ non-driving population who have public transportation available serves to add credence to this circumstantial conclusion. Living in areas with higher levels of housing density, in central

city areas, areas with relatively high proportions of white population, and having higher levels of education, are associated with transit use. Notably, the proximity of bus service to the home does not appear to be related to transit use. Although gross proximity does not emerge as a key factor, transit use seems to be positively influenced to some degree by characteristics that may be associated with both transit quality and safety. Densely settled, white, affluent areas may offer a mix of transit availability, transit quality, and perceived community safety that promote use of alternative modes among older persons. Older persons in less affluent, urban core areas may be more dependent on public transit, and may have good access to public transportation in terms of proximity (17), but may be hesitant to use it because of safety or quality concerns (18,2,7,16). Indeed, the analyses conducted here suggest that when other factors are controlled, "urban" dwellers are less inclined to go out than 75+ non-drivers that live in other venues, but they are more likely to rely on transit when they do go out. Safety concerns may have a similar dampening effect on the propensity to walk among older urban residents. The NPTS asked questions about perceived transit quality in 1995. However, the questions were asked only of those who reported regular transit use, making it impossible to

A gap clearly exists in our view of the potential barriers to mobility experienced by older non-drivers. Evidence from the 1995 National Personal Transportation Survey suggests a relationship between mobility among the non-driving 75+ population and the character of their communities that runs counter to the conventional wisdom - mobility appears

investigate the potential influence of perceived transit quality on the non-use of available

public transportation.

reduced in urban areas. Additional research to validate this finding, and to enhance our understanding of the influences of transit quality and community safety on mobility among non-drivers age 75 and older is needed.

It has been suggested that policies promoting an elderly "gentrification" of our major urban centers might offer relief from the mobility problems that may follow from the aging of the baby boom in the suburbs (19). Clearly, the proximity advantages and efficiencies in infrastructure that follow from typical urban density and mass make this an appealing approach. While it can be argued that the social and economic momentum of an urban migration would serve to mitigate the public safety and service quality concerns associated with many major urban centers, these issues may serve as barriers to initial acceptance of such an approach. A better understanding of the mobility implications of urban life for older Americans would serve to inform this policy discussion, and may offer options to improve the quality of urban life for today's older population.

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